(March 22, 2002 Draft)
California Regional Water Quality Control Board
Santa Ana Region

Monitoring and Reporting Program No. R8-2002-0011
NPDES No. CAS618033

for
Riverside County Flood Control and Water Conservation District,
The County of Riverside, and The Incorporated Cities of Riverside County
Within the Santa Ana Region
Area Wide Urban Storm Water Runoff

I. GENERAL

A. Revisions of the monitoring and reporting program are appropriate to ensure that the Permittees are in compliance with requirements and provisions contained in this Order. Revisions may be made under the direction of the Executive Officer at any time during the term, and may include a reduction or increase in the number of parameters to be monitored, the frequency of monitoring, or the number and size of samples collected.

B. The Executive Officer is authorized to allow the Permittees to participate in statewide, national, or other monitoring programs in lieu of this monitoring program.

C. All sample collection, handling, storage, and analysis shall be in accordance with 40 CFR Part 136 or other methods approved by the Executive Officer.

D. The Permittees are authorized to complement their monitoring data with data from other monitoring sources, provided the monitoring conditions and sources are similar to those in the Santa Ana Watershed.

E. The Principal Permittee has been monitoring storm water and receiving waters since the first permit term. It is recognized that some of the objectives noted in Section II, below, may not have been attainable during the previous permit terms. It is hoped that continuous monitoring for long term shall help to accomplish these objectives. The Regional Board authorizes the Executive Officer to evaluate and determine adequate progress toward meeting each objective.

F. This Order references three components of the monitoring program: (1) The existing monitoring program shall continue to be implemented until the integrated watershed monitoring program is approved; (2) An integrated watershed monitoring program is to be developed under this Order to identify data gaps and to attain the objectives specified in Section II, below and (3) Other regional monitoring efforts where the Permittees participate or make monetary contributions.

G. The Permittees shall develop and submit a consolidated monitoring program for approval by the Executive Officer of the Regional Board. The consolidated

program for water quality monitoring should be capable of attaining the objectives mentioned below.

II. OBJECTIVES

The overall goal of the monitoring program is to develop and support an effective watershed management program. The following are the major objectives:

A. To identify those waters, which, without additional action to control pollution from urban storm water discharges, cannot reasonably be expected to attain or maintain applicable water quality standards required to sustain the beneficial uses in the Basin Plan (TMDL monitoring)

B. To develop and support an effective municipal urban runoff and non-point source control program.

C. To identify water quality problems, trends, Characterize pollutants associated with urban storm water discharges, and to assess the influence of urban land uses on water quality and the beneficial uses of receiving waters.

D. To identify other sources of pollutants in storm water runoff to the maximum extent possible including, but not limited to, atmospheric deposition and contaminated sediments.

E. To identify and prohibit illicit connections.

F. To verify and to control illegal discharges.

G. To evaluate the effectiveness of existing municipal storm water quality management programs, including an estimate of pollutant reductions achieved by the structural and nonstructural BMPs implemented by the Permittees.

H. To conduct monitoring in cooperation with San Bernardino County for investigation of bacteriological impairments in the upper Santa Ana River due to urban runoff.

I. To evaluate costs and benefits of proposed municipal storm water quality control programs to the Permittees and other stakeholders including the public.

III. MONITORING PROGRAM REQUIREMENTS

A. TMDL/303(d) Listed Waterbody Monitoring: The Permittees shall continue to participate in the TMDL and Southern California Cooperative Storm Water Research/Monitoring programs. In addition, strategies must be revised/developed to evaluate the impacts of storm water or non-storm water

runoff on identified impairments within the Santa Ana River watershed and other tributary 303(d) listed waterbodies. Since the 303(d) listing is dynamic, with new waterbodies and new impairments being identified over time, the Permittees shall revise their monitoring plan to incorporate new information, as it becomes available.

B. The Permittees shall revise, within one year of adoption of this Order, their Water Quality Monitoring Program to include, at a minimum, the following monitoring components or their equivalence:

1. Mass Emissions Monitoring:

   a. Monitor mass emissions in order to: (a) estimate the total mass emissions from the MS4; (b) assess trends in mass emissions over time; and (c) to determine if the MS4 is contributing to exceedances of water quality objectives or beneficial uses, by comparing results to the California Toxics Rule (CTR), Basin Plan, Ocean Plan and/or other relevant standards.

   b. Representative samples from the first storm event and two more storm events shall be collected during the rainy season. A minimum of three dry-weather samples shall also be collected. Samples from the first rain event each year shall be analyzed for the entire suite of priority pollutants. All samples must be analyzed for metals, pH, TSS, TOC, pesticides/herbicides, and constituents that are known to have contributed to impairment of local receiving waters. Dry weather samples should also include an analysis for oil and grease. Sediments associated with mass emissions should be analyzed for constituents of concern identified in the water analyses.

2. Microbial Monitoring: The Santa Ana River, Reach 3 and its tributaries shall be monitored for bacteriological constituents. This monitoring program may be developed in collaboration with the municipal Permittees in San Bernardino and Orange Counties.

3. Water Column Toxicity Monitoring: Analyses for toxicity to freshwater species shall be performed on mass emissions samples to determine the impacts of storm water and non-storm water runoff on toxicity of receiving waters. *Ceriodaphnia dubia* and *Strongylocentrotus purpuratus* fertilization shall be used to evaluate toxicity on the sample from the first rain event, plus one other wet weather sample and two dry weather samples. In addition, criteria shall be identified which will trigger the initiation of Toxicity Identification Evaluations (TIEs) and Toxicity Reduction Evaluations (TREs).

4. Reconnaissance: The Permittees shall develop new reconnaissance strategies to identify and prohibit illicit discharges. Where possible, the use of GIS to identify geographic areas with a high density of industries associated with gross pollution (e.g. electroplating industries, auto dismantlers) and/or locations subject to maximum sediment loss (e.g. new development) may be used to determine areas for intensive monitoring efforts. Additionally, the Permittees shall coordinate with the Regional Board to develop a comprehensive database

to include all enforcement actions for storm water violations and unauthorized, non-storm water discharges, that can then be used to more effectively target reconnaissance efforts.

5. Land Use Correlations: The Permittees shall develop and implement strategies for determining the effects of land use on the quality of receiving waters. While it is recognized that a wide range of land uses exist across the region and within each subwatershed, one relationship that may be easily determined is the impact of development on sediment loading within receiving waters, since developed areas contribute relatively little sediment loading compared to areas under construction. Consequently, the Permittees shall, at a minimum, analyze the impacts of increasing development and the conversion of agricultural land to the sediment loading of Canyon Lake, Lake Elsinore, and the Santa Ana River (Reaches 3 and 4).
6. Sources of Data: Where possible and applicable, data shall be obtained from monitoring efforts of other public or private agencies/entities (e.g., Caltrans).

C. Within one year of adoption of this Order, the Permittees shall develop and submit for approval of the Executive Officer, their revised Water Quality Monitoring Program, which should yield an integrated watershed-monitoring approach capable, to the maximum extent possible, of achieving the above-stated goals. In order to minimize cost and maximize benefits, it is highly recommended that this program be developed in cooperation with the SCCRWP, the Riverside County Environmental Health Department, and/or other public or private agencies/entities. The development and implementation of the monitoring program shall be in accordance with the time schedules prescribed by the Executive Officer. At a minimum, the program shall include the following and any requirements developed by the State Board in accordance with Water Code Section 13383.5:

1. Uniform guidelines for quality control, quality assurance, data collection and data analysis.

2. A mechanism for the collection, analysis and interpretation of existing data from local, regional or national monitoring programs. These data sources may be utilized to characterize different storm water sources; to determine pollutant generation, transport and fate; to develop a relationship between land use, development size, storm size and the event mean concentration of pollutants; to determine spatial and temporal variances in storm water quality and seasonal and other bias in the collected data; and to identify any unique features of the Santa Ana Watershed. The Permittees are encouraged to use data from similar studies, if available.

3. A description of the monitoring program including:

   a. The number of monitoring stations;

b. Monitoring locations within flood control channels, in the rivers, lakes and their tributaries, major outfalls, and other receiving waters;
c. Environmental indicators (e.g., ecosystem, biological, habitat, chemical, sediment, stream health, etc.) chosen for monitoring;
d. Total number of samples to be collected from each station, frequency of sampling during wet and dry weather, short duration or long duration storm events, type of samples (grab, 24-hour composite, etc.), justification for composite versus discrete sampling, type of sampling equipment, quality assurance/quality control procedures followed during sampling and analysis, analysis protocols to be followed (including sample preparation and maximum reporting limits), and identity qualifications of laboratories performing analyses;
e. A mechanism for analyzing the collected data and interpreting the results including an evaluation of the effectiveness of the management practices, and need for any refinement of the management practices.
f. Parameters selected for field screening and for laboratory work; and
g. A description of the responsibilities of all the participants in this program including cost sharing.

IV. REPORTING

A. All progress reports and proposed strategies and plans required by this Order shall be signed by the Principal Permittee, and copies shall be submitted to the Executive Officer of the Regional Board under penalty of perjury.

B. The Permittees shall submit an **ANNUAL PROGRESS REPORT** to the Executive Officer of the Regional Board and to the Regional Administrator of the U.S. EPA, Region 9, no later than November 30th, of each year. This progress report may be submitted in a mutually agreeable electronic format. At a minimum, annual progress report shall include the following:

1. A. review of the status of program implementation and compliance (or non-compliance) with the schedules contained in this order;

2. An assessment of the effectiveness of control measures established under the illicit discharge elimination program and the Drainage Area Management Plan. The effectiveness may be measured in terms of how successful the program has been in eliminating illicit connections/illegal discharges and reducing pollutant loads in storm water discharges;

3. An assessment of any storm water management program modifications made to comply with Clean Water Act requirements to reduce the discharge of pollutants to the maximum extent practicable;

4. A summary, evaluation, and discussion of monitoring results from the previous year and any changes to the monitoring program for the following year;

5. A fiscal analysis progress report as described in Section XV, Provision B., of Order No. R8-2002-0011;

6. A draft work plan that describes the proposed implementation of the DAMP for next fiscal year. The work plan shall include clearly defined tasks, responsibilities, and schedules for implementation of the storm water program and each Permittee's actions for the next fiscal year; and

7. Major changes in any previously submitted plans/policies; and

8. An assessment of the Permittees compliance status with the Receiving Water Limitations, Section III of the Order, including any proposed modifications to the DAMP if the Receiving Water Limitations are not fully achieved.

C. The Co-Permittees shall be responsible for the submittal of all required information/materials needed to comply with this order in a timely manner to the Principal Permittee. A duly authorized representative of the Co-Permittee under penalty of perjury shall sign all such submittals.

V. REPORTING SCHEDULE

All reports required by this order shall be submitted to the Executive Officer of the Regional Board in accordance with the following schedule:

REFERENCE	ITEM	COMPLETION TIME AFTER PERMIT ADOPTION/FREQ.	REPORT DUE DATE
I.A.1.e.	Evaluate the established criteria for inspections of the municipal storm sewer systems and establish criteria for regular maintenance and cleaning of storm drain systems.	6 months.	Nov. of the year following adoption.
I.A.2.b.	Permittee Technical Committee meetings to discuss permit implementation and regional and state-wide issues	Held at least 10 times each year	Annually on Nov. 30th
I.B.1.c	Review effectiveness of ordinances in prohibiting discharges to MS4's as listed in Section II (Limitations/Prohibitions).	6 months.	Nov. of the year of adoption.
II.F.	Evaluate Section II.C. discharges to determine if pollutants are present.	18 months.	Nov. of the year following adoption.
IV.A.	Revise existing Implementation Agreement.	6 Months	Nov. of the year following adoption.
IV.B.	Evaluate Storm Water Management structure and Implementation Agreement annually.	Annually on Nov. 30th	Annually on Nov. 30th
V.C.	Enact ordinances or other local regulatory mechanisms that include sanctions to ensure compliance	12 Months.	Nov. of the year following adoption.

REFERENCE	ITEM	COMPLETION TIME AFTER PERMIT ADOPTION/FREQ.	REPORT DUE DATE
V.E.	Provide a report on the effectiveness of their water quality ordinances and their enforcement, in prohibiting illegal discharges to the MS4s	12 Months	Nov. of the year following adoption.
V.F.	Develop restaurant inspections program, which includes runoff, grease blockage, and spill reduction aspects.	12 Months.	Nov. of the year following adoption.
V.G.	Legal Authority & Enforcement Strategy, Certification	18 months.	Nov. of the year following adoption.
VI.D.	Evaluate available BMPs & recommend any improvements needed.	18 Months.	Nov. of the year following adoption.
VI.E.	Litter/Trash Control Ordinance review	18 Months.	Nov. of the year following adoption.
VII. A.	With the Local Sewering Agencies, propose a mechanism to determine and control the impact of infiltration from leaking sanitary sewer systems on storm water quality and Develop unified response to sewage spills.	16 months.	Nov. of the year following adoption.
VII.B.	Develop mechanism to address Septic System Failures	12 Months.	Nov. of the year following adoption.
VII. C.	Review current oversight programs for portable toilets to determine the need for any revision	12 Months.	Nov. of the year following adoption.
VIII. A. 1	Establish mechanism to ensure local permits for proposed construction sites and industrial facilities are conditioned upon proof of obtaining coverage under the applicable State General Permit(s)/Regional Board San Jacinto General Construction Permit	6 months	Nov. of the year following adoption.
VIII. A.8	Review planning procedures and CEQA document preparation processes	12 Months	April 10th of the year following adoption.
VIII. A.9	Incorporate watershed protection principles and policies into the General Plan	24 Months	Nov. of the second year following adoption
VIII.A.10	Review and revise, as necessary, grading/erosion control ordinances to reduce erosion.	12 Months,	Nov. of the year following adoption.
VIII.A.11	Select a new development site to evaluate a selected BMP	12 Months	Nov. of the year following adoption.
VIII.B.1.	Review existing BMPs for New Developments and Water Quality Management Plan to determine need for development of Water Quality Management Plan	12 Months .	Nov. of the year following adoption.
VIII.B.5.	In the absence of an approved WQMP, the structural BMPs for all new development and significant redevelopment shall be sized to comply with one of the numeric sizing criteria given.	February 15, 2004	Nov. 30, 2004

REFERENCE	ITEM	COMPLETION TIME AFTER PERMIT ADOPTION/FREQ.	REPORT DUE DATE
IX.A.1.	Develop and update a construction site database, including site information, priority, and inspection information	12 Months.	Nov. of the year following adoption.
IX.A.2.	Develop and update criteria for inspection of Industrial facilities, including site information, priority, and inspection information	12 Months.	Nov. of the year following adoption.
IX. A.6., IX.B.9., & IX.C.9.	Public agency staff and contract field operations staff adequately trained.	12 Months, and annually thereafter.	Nov. of the year following adoption.
IX.B.1.	Develop and update an industrial facilities database, including facility information, priority, and inspection information	12 Months.	Nov. of the year following adoption.
IX.B.2.	Develop and update criteria for inspection of Industrial facilities, including site information, priority, and inspection information	12 Months.	Nov. of the year following adoption.
IX.B.5	Identify remaining industrial facilities that do not have business permits or other authorization by the Permittees	36 Months	Nov. of the third year following adoption.
IX.C.1.	Develop and update a commercial site database, including facility information, priority, and inspection information	6 Months.	Nov. of the year following adoption.
X.B.	Complete Public Awareness Survey	6 months.	Nov. of the year of adoption.
X. D.	Establish Public Education Committee	12 Months.	Nov. of the year of adoption.
X. E.	Develop a study to measure effect of modified education program	12 Months	Nov. of the fifth year following adoption.
X. F.	BMP Guidance for Restaurants, Automotive Service Centers, and Gasoline Service Stations, developed by Public Education Committee	6 Months	Nov. of the year of adoption.
X.G.	Develop public education materials including reporting hot-line and web site.	6 Months	Nov. 30, 2002
X. H	BMP Guidance for Control of Potential Polluting Activities not otherwise regulated	18 Months.	Nov. of the year following adoption.
X. I.	Determine the best method to provide educational and General Industrial Permit materials to businesses within their jurisdiction	6 months	Nov. of the year following adoption.
XI.B.	Develop BMPs for fire fighting training & equipment testing.	12 Months	Nov. of the year following adoption.
XI.C.	Review Municipal Facilities Strategy & Evaluate Environmental Performance Program applicability to municipal maintenance contracts, contract for field maintenance operations, and leases	Annually on August 1st	Nov. 30th
XI.D.	Review opportunities to configure/reconfigure flood control facilities	6 months.	Nov. of the year following adoption.

REFERENCE	ITEM	COMPLETION TIME AFTER PERMIT ADOPTION/FREQ.	REPORT DUE DATE
XI.E.	Develop Model Public Facility Maintenance Program for activities and drainage facilities.	6 months.	Nov. of the year following adoption.
XI.F.	Implement program to clean out drainage facilities.	24 Months	Nov. of the second year following adoption.
XI.H.	Develop and distribute BMP guidance for public agency and contract field operations and maintenance staff	6 months	Nov. of the year following adoption.
XI.L.	Evaluate street/road sweeping frequency	Annually	Annually on Nov. 30th
XII.B.	Comply with the requirements for municipal construction projects that may result in land disturbance greater than one acre.	12 Months	Nov. of the year following adoption.
XIII.A.	Revise the DAMP	Nov 2003	Nov. 30, 2003
XIII.C.	Evaluate the DAMP for additional revision.	Annually on August 1st	Nov. 30th
XV.B.	Annual Report/Fiscal Analysis	Annually	Nov. 30th
XVI.A.	Report of Waste Discharge	180 days before permit expires	January 19, 2007 ee.
Attachment 3 III.B.	Revise Water Quality Monitoring Program	12 Months	Nov. of the year following adoption.
Attachment 3 III.C.	Proposed Revised Water Quality Monitoring Program for integrated approach.	12 Months	Nov. of the year following adoption.
Attachment 3. IV.B.4	Re-evaluate monitoring program priorities based on previous year's data	Annually, Nov.30th	Nov. 30th

Ordered by_____

Gerard J. Thibeault
Executive Officer
July 19, 2002